

METHOD AND SYSTEM FOR STORING INFORMATION USING NANO-  
PINNED DIPOLE MAGNETIC VORTICES  
IN SUPERCONDUCTING MATERIALS

ABSTRACT OF THE DISCLOSURE

A method includes providing a superconducting material having pinning sites that can pin magnetic vortices within the superconducting material. The method  
5 also includes pinning one or more magnetic vortices at one or more of the pinning sites. An information storage apparatus includes a superconducting material, doped particles within the superconducting material that can pin dipole magnetic vortices, a magnetic tip that  
10 generates pinned magnetic vortices and a magnetic detector that detects pinned magnetic vortices.

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